AMENDMENTS TO THE CLAIMS

1. (currently amended) An implantable electronic module, comprising:

an hermetically-sealed housing ~~having a length no greater than about 27 mm and cross-sectional dimensions no greater than about 3.3 mm~~;

an electronic subassembly housed within said hermetically-sealed housing;

~~self-contained~~a rechargeable power source ~~means~~ contained within said hermetically-sealed housing and operatively connected to said electronic subassembly for providing operating power to said electronic subassembly;

a first electrode external to said hermetically-sealed housing and electrically coupled to said electronic subassembly;

a second electrode external to said hermetically-sealed housing and electrically coupled to said electronic subassembly;

an antenna coil within said hermetically-sealed housing; and

telemetry circuitry~~means~~, coupled to said antenna coil, for allowing data-containing signals to be received from and sent to ~~an~~ at least one external device,

wherein the electronic subassembly measures a rectified voltage during recharging of the rechargeable power source via an external charging field, and transmits the measured voltage to one of the at least one external devices.

2. (original) The electronic module of Claim 1 wherein the electronic subassembly includes a ferrite core around which the antenna coil is wrapped.

3. (original) The electronic module of Claim 2 wherein the ferrite core includes a first half and a second half.

4. (currently amended) The electronic module of Claim 1 ~~3~~ wherein ~~the self-contained power source is selected from the group comprising: a primary battery, a rechargeable battery, a super capacitor, a nuclear battery, a mechanical resonator, an infrared collector, a thermally-powered energy source, a flexural powered energy source, a bioenergy power source, a fuel cell, a bioelectrical cell, and an osmotic pressure pump~~ the measured voltage is measured when no stimulation pulse is being provided by the electronic subassembly.

5. (original) The electronic module of Claim 4 wherein the hermetically-sealed housing comprises a tubular-shaped housing having a length no greater than about 27 mm and a diameter no greater than about 3.3 mm.

6. (original) The electronic module of Claim 4 wherein the electronic subassembly includes means for generating stimulation pulses that are applied through the first and second electrodes.

7. (original) The electronic module of Claim 6 wherein at least one of the first and second electrodes is carried on an external surface of said hermetically-sealed case.

8. (currently amended) The electronic module of Claim 1 wherein the rechargeable ~~self-contained~~ power source ~~means~~ comprises a ~~primary battery~~lithium-ion battery.

9. (currently amended) The electronic module of claim 5 wherein the ~~self-contained~~rechargeable power source ~~means further includes~~comprises a super capacitor.

10. (currently amended) The electronic module of claim 1 wherein the ~~self-contained~~rechargeable power source ~~means~~ comprises a rechargeable battery.

11. (currently amended) The electronic module of claim ~~7~~ 1 wherein ~~the self-contained power source means further includes a super capacitor~~at least one of the external devices is an external charger.

12. (currently amended) An implantable electronic module, comprising:

an hermetically-sealed housing ~~having a length no greater than about 27 mm and cross-sectional dimensions no greater than about 3.3 mm~~;

an electronic subassembly housed within said hermetically-sealed housing;

a rechargeable ~~self-contained~~ power source ~~means~~ contained within said hermetically-sealed housing and operatively connected to said electronic subassembly for providing operating power to said electronic subassembly;

a first electrode external to said hermetically-sealed housing and electrically coupled to said electronic subassembly;

a second electrode external to said hermetically-sealed housing and electrically coupled to said electronic subassembly; and

telemetry ~~means~~ circuitry for allowing data-containing signals to be received from and sent to ~~an~~ at least one external device,

wherein the electronic subassembly measures a voltage during recharging of the rechargeable power source via an external charging field, and transmits the measured voltage to one of the at least one external devices.

13. (currently amended) The electronic module of claim 12 wherein the measured voltage is measured when no stimulation pulse is being provided by the electronic subassembly ~~the self-contained power source is selected from the group comprising: a primary battery, a rechargeable battery, a super capacitor, a nuclear battery, a mechanical resonator, an infrared collector, a thermally-powered energy source, a flexural powered energy source, a bioenergy power source, a fuel cell, a bioelectrical cell, and an osmotic pressure pump~~.

14. (currently amended) The electronic module of claim 12 wherein the ~~self-contained~~rechargeable power source ~~means~~ comprises a ~~primary~~ lithium-ion battery.

15. (currently amended) The electronic module of claim 14 wherein the ~~self-contained~~rechargeable power source ~~means further includes~~ comprises a super capacitor.

16. (currently amended) The electronic module of claim 12 wherein the ~~self-contained~~ rechargeable power source ~~means~~ comprises a rechargeable battery.

17. (currently amended) The electronic module of claim 16 wherein the hermetically-sealed housing is tubular shaped ~~the self-contained power source means further includes a super capacitor~~.

18. (currently amended) An implantable neural stimulator module, comprising:

an hermetically-sealed housing ~~having a length no greater than about 30 mm and cross-sectional dimensions no greater than about 3.7 mm~~;

an electronic subassembly housed within said hermetically-sealed housing;

a rechargeable ~~self-contained~~ power source ~~means~~ contained within said hermetically-sealed housing and operatively connected to said electronic subassembly for providing operating power to said electronic subassembly;

a first electrode external to said hermetically-sealed housing and electrically coupled to said electronic subassembly; and

a second electrode external to said hermetically-sealed housing and electrically coupled to said electronic subassembly, ~~; and~~

~~telemetry means for allowing data-containing signals to be received from and sent to an external device~~

wherein the electronic subassembly measures a voltage during recharging of the rechargeable power source via an external charging field, and wirelessly transmits the measured voltage to at least one external device.

19. (currently amended) The implantable neural stimulator module of claim 18 wherein at least one of the first and second electrodes is carried on an external surface of said hermetically-sealed case ~~wherein the self-contained power source means comprises a primary battery~~.

20. (currently amended) The implantable neural stimulator module of claim 18 wherein the ~~self-contained~~rechargeable power source ~~means~~ comprises a rechargeable battery.